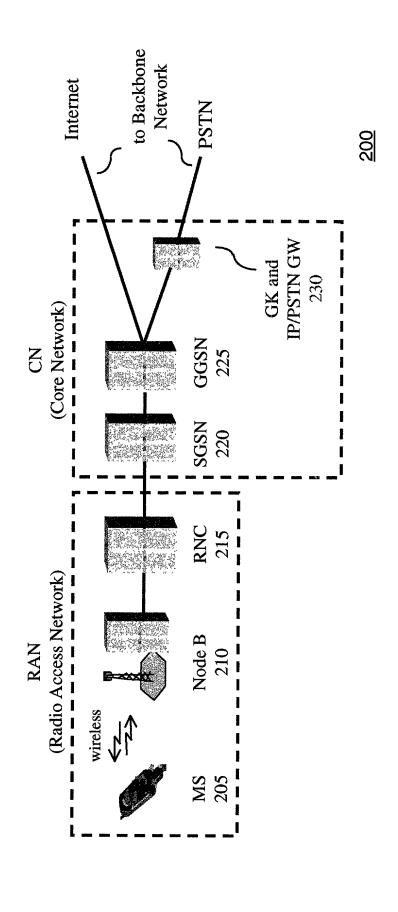
FIG. 1





QoS IE 300

Prior Art

FIG. 2

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Octet 10 Octet 12 Octet 2 Octet 3 Octet 4 Octet 5 Octet 6 Octet 7 Octet 8 Octet 9 Octet 13 Octet 1 Octet 11 Traffic Handling Delivery of erroneous Precedence Class Reliability Class **Priority** SDU error ratio 2 Mean Throughput Maximum Bit Rate for downlink Length of Quality of Service IE Guaranteed bit rate for downlink Maximum Bit Rate for uplink Guaranteed bit rate for uplink Quality of Service IEI Maximum SDU size Delivery Order spare 0 Delay Class Transfer delay Peak Throughput Residual BER Traffic Class spare \_ spare  $\infty$ 

Prior Art

FIG. 3

Packet Data Protocol (PDP) Context Activation Procedure

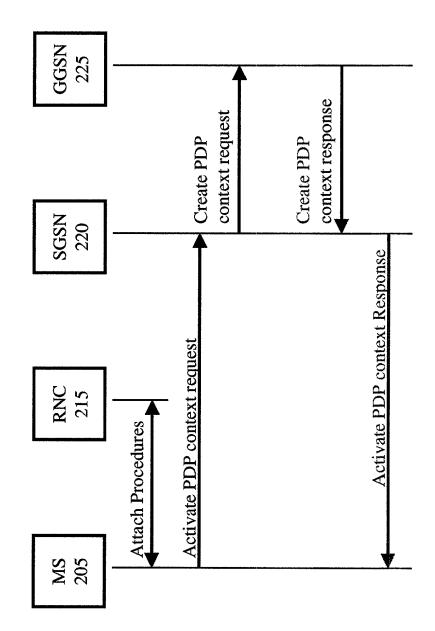


FIG. 4

	Octet 1	Octet 2	Octet 3	Octet 4	Octet 5	Octet 6	Octet 7	Octet 8	Octet 9	Octet 10	Octet 11	Octet 12	Octet 13	Octet 14	Octet 15	Octet 16	Octet 17	Octet 18
3 2 1		rvice IE	Reliability Class	Precedence Class	Mean Throughput	Downlink Delivery of erroneous SDU		. uplink	lownlink	Downlink SDU error ratio	Traffic Handling Priority	it rate for uplink	rate for downlink	it rate for uplink	rate for downlink	Uplink Delivery	Uplink SDU error ratio	Spare
5 4	Quality of Service IEI	Length of Quality of Service IE	Delay Class	out 0 spare	Mea	Downlink Delivery Order	Maximum SDU size	Maximum Bit Rate for uplink	Maximum Bit Rate for downlink		Downlink Transfer delay	Maximum Desired Guaranteed bit rate for uplink	Maximum Desired Guaranteed bit rate for downlink	Minimum Desired Guaranteed bit rate for uplink	Minimum Desired Guaranteed bit rate for downlink	Uplink		Uplink Transfer delay
8 7 6	! ! ! ! ! ! ! ! !	Leng	0 0 spare	Peak Throughput	D T R	Downlink Traffic Class		May	Maxi	Downlink Residual BER	Downlink	Maximum De	Maximum Des	Minimum De	Minimum Desi	Uplink	Uplink Residual BER	Uplink T
Asymmetric QoS IE	400		L	ii	<u> </u>	<u></u>	L		<b>L</b> _ J	<b>L</b> i	<u>i J</u>	<u> </u>	L		<b>.</b>	J	. <b>i</b> i	}

## 

FIG. 5

D bit	Traffic Class Field Value	Traffic Class
0	000	Subscribed traffic class/Reserved
0	001	Conversational
0	010	Streaming
0	011	Interactive
0	100	Background
0	101	Reserved
0	110	Reserved
0	111	Reserved
1	000	Subscribed traffic class/Reserved
1	001	Conversational
1	010	Streaming
1	011	Interactive
1	100	Background
1	101	First try Streaming, then Interactive
Ţ	110	First try Interactive, then Background
		First try Streaming, then Interactive, then Background

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	Octet 1	Octet 2	Octet 3	Octet 4	Octet 5	Octet 6	Octet 7	Octet 8	Octet 9	Octet 10	Octet 11	Octet 12	Octet 13	Octet 14	Octet 15	Octet 16	Octet 17	Octet 18
2 1			Reliability Class	Precedence Class	ghput	Downlink Delivery of erroneous SDU				Downlink SDU error ratio	Traffic Handling Priority	or uplink	downlink	r uplink	downlink	Uplink Delivery	Uplink SDU error ratio	Spare
3	ce IEI	Service IE	Re		Mean Throughput			for uplink	r downlink	ownlink S		d bit rate fo	bit rate for	d bit rate fo	bit rate for	er Op	in,	
5 4	Quality of Service IEI	Length of Quality of Service IE	Delay Class	0 Spare	Ŋ	Downlink Delivery Order	Maximum SDU size	Maximum Bit Rate for uplink	Maximum Bit Rate for downlink		Downlink Transfer delay	Maximum Desired Guaranteed bit rate for uplink	Maximum Desired Guaranteed bit rate for downlink	Minimum Desired Guaranteed bit rate for uplink	Minimum Desired Guaranteed bit rate for downlink	Uplink Delivery Order	R	Uplink Transfer delay
9	n\omega\	Length		Peak Throughput	R	ık ass		Maxim	Maximu	Residual B	wnlink Tr	num Desir	ım Desirec	num Desire	m Desired	336	ual BE	plink Trar
7			0 spare	Peak T	L	Downlink Traffic Class				Downlink Residual BER	Do	Maxin	Maxim	Minin	Minimu	Uplink Traffic Class	Uplink Re	n
<b>三</b>			Ω		Q													
Asymmetric QoS IE	200																	

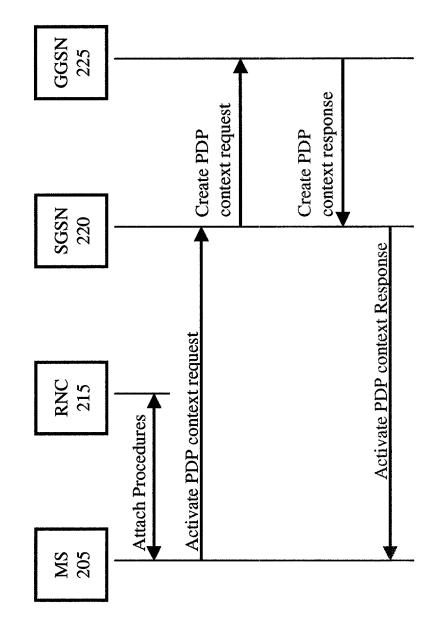
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FIG. 7

U bit	D bit	Traffic Class Field Value	Traffic Class
0	0	000	Subscribed traffic class/Reserved
0	0	001	Conversational
0	0	010	Streaming
0	0	011	Interactive
0	0	100	Background
0	0	101	Reserved
0	0	110	Reserved
0	0	111	Reserved
Ţ	0	101	Interactive to Streaming
1	0	110	Best Effort to Interactive
	0	111	Best Effort to Streaming, else to Interactive

FIG. 8

Packet Data Protocol (PDP) Context Activation Procedure with asymmetric QoS IE



Asymmetric QoS negotiation

